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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/527,797

03/15/2005

Hiroyuki Tomizawa

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NIXON PEABODY, LLP

401 9TH STREET, NW

SUITE 900

WASHINGTON, DC 20004-2128

EXAMINER

SHEEHAN, JOHN P

ART UNIT

PAPER NUMBER

1742

MAIL DATE

DELIVERY MODE

09/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/527,797

Applicant(s)

TOMIZAWA ET AL.

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/15/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Interpretation

2. Product claims 1, 2 and 4 recite the transitional term, "comprising" (e.g. claim 1, line 2) which is open terminology that leaves the claim open to any unrecited elements even in major amounts. Product claims 1, 2 and 4 have been interpreted accordingly.
3. In like manner, process claims 5 and 6 recite the transitional term, "comprising" (e.g. claim 5, line 2) which is open terminology that leaves the claim open to any unrecited process steps. Process claims 5 and 6 have been interpreted accordingly.

The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) ("Comprising" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 229 USPQ 805 (Fed. Cir. 1986); *In re Baxter*, 656 F.2d 679, 686, 210 USPQ 795, 803 (CCPA 1981); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948) ("comprising" leaves "the claim open for the inclusion of unspecified ingredients even in major amounts"). See MPEP 2111.03.

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4. Claim 4 recites, "an oxygen concentration of at most 0.5 mass%, a nitrogen concentration of at most 0.2 mass%, and a hydrogen concentration of at most 0.01 mass%" (emphasis added by the Examiner). The term, "at most" describes the upper limit of the recited component, however no lower limit is claimed. Therefore this claim language is considered to encompass 0 mass%. Thus, claim 4 has been interpreted to not necessarily require the presence of oxygen, nitrogen or hydrogen.

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Uchida et al. (Uchida '365, US Patent No. 6,468,365, cited in the IDS submitted March 15, 2005).

Uchida '365 teaches specific examples of R-T-B sintered magnets having compositions that are encompassed by the R-T-B sintered magnet composition recited in applicants' claims 1, 2 and 4 (column 12, lines 17 to 25; column 13, lines 16 to 25; and column 14, lines 30 to 37). Uchida '365 also teaches a process that is substantially

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the same as applicants' disclosed process of making the instantly claimed R-T-B sintered magnets (for example compare applicants' disclosed process to each of column 12, lines 3 to 16; column 14, lines 10 to 20 and column 14, lines 16 to 25).

Uchida '365's disclosed process includes a post sintering heat treatment at 500°C which is encompassed by the post sintering heat treatment step at 400°C to 600°C disclosed by applicants

The claims and Uchida '365 differ in that Uchida '365 is silent with respect to the relative proportions of the $R_2T_{14}B$ and $R_{1.1}Fe_4B_4$ phases as recited in claim 1.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because Uchida '365's R-T-B sintered magnets have compositions that are encompassed by the instant claims and are made by a process which is substantially the same as applicants' process of making the instantly claimed alloy. In view of this, Uchida '365's R-T-B sintered magnets would be expected to possess all the same properties as recited in the instant claims, including the relative proportions of the $R_2T_{14}B$ and $R_{1.1}Fe_4B_4$ phases, In re Best, 195 USPQ, 430 and MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

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8. Claim 5 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Uchida et al. (Uchida '365, US Patent No. 6,468,365, cited in the IDS submitted March 15, 2005).

As set forth above, Uchida '365 teaches specific examples of R-T-B sintered magnets having compositions that are encompassed by the R-T-B sintered magnet composition recited in applicants' claims 1, 2 and 4 (column 12, lines 17 to 25; column 13, lines 16 to 25; and column 14, lines 30 to 37). Uchida '365 teaches a process that is also encompassed by the instant claims (column 12, lines 3 to 16; column 14, lines 10 to 20 and column 14, lines 16 to 25). The process taught by each of these examples includes two heat treatments after sintering, a first heat treatment at 900°C and a second heat treatment at 500°C. Uchida '365's second heat treatment at 500°C step is encompassed by the post sintering heat treatment step at 400°C to 600°C recited in applicants' process claim 5 (claim 5, the last line).

Uchida '365 and claims 5 differ in that Uchida '365 teaches a second post sintering heat treatment step.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because in view of the explanation set forth under the heading, "Claim Interpretation" regarding use of the open terminology, "comprising" in the applicants' claims, Uchida '365's second heat treatment at 900°C is encompassed by process claim 5.

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Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. (Uchida '365, US Patent No. 6,468,365, cited in the IDS submitted March 15, 2005). as applied to claim 5 above, and further in view of Li (US Patent No. 6,527,874).

Uchida '365 teaches and is applied as set forth above in the rejection of claim 5. Additionally, it is noted that Uchida '365 does require any particular method of casting the R-T-B alloys.

Li teaches that strip casting improves the magnetic properties of R-T-B alloys (for example, see Figures 1 and 2 and column 3, lines 17 to 24).

Uchida '365 and claim 6 differ in that Uchida '365 is silent with respect to the specific method of casting the R-T-B alloys.

However, one of ordinary skill in the art at the time the invention was made would have been motivated to strip cast Uchida '365's R-T-B alloys so as to improve the magnetic properties of the R-T-B alloys as taught by Li.

Conclusion

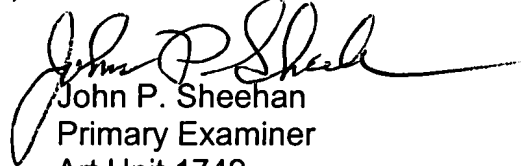
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571)

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272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John P. Sheehan
Primary Examiner
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JPS